

REMARKS

Claims 1-3 and 6-10 were rejected under 35 U.S.C. 103 over the combination of Fabbri in view of Samaritani. This rejection is respectfully traversed.

The present invention relates to a pharmaceutical composition which contains a solid intimate mixture of human growth releasing factor (GRF) and a stabilizing amount of saccharose or to a solution formed by reconstituting the solid mixture and to a process of forming a lyophilizate. The Fabbri patent likewise relates to GRF and as correctly noted in the Office Action, the reference does not teach the use of saccharose in pharmaceutical compositions for any purpose.

Applicants believe the Examiner has correctly set forth the teachings of co-inventor Samaritini's European application in the middle paragraph on page 3 of the Office Action but respectfully points out that the Office Action mischaracterizes the teachings of Samaritini in the last sentence on that page. Samaritini does not teach that highly purified proteins are stabilized with saccharose.

The Samaritini reference is specifically, and explicatedly, limited to human growth hormone. HGH consists of 191 amino acids, has a molecular weight of 22,000 and is a linear polypeptide containing two interchange disulfide bridges. In contrast, GRF is a small peptide existing in 44, 40 or 37 amino acid forms with the activity mainly residing in the first 29 amino acid residues. GRF is thus very different from HGH. There is nothing in Samaritini which teaches or suggests that saccharose can be used to stabilize anything other than HGH, much less a peptide which is so very different from the complex and large HGH.

The Office Action makes reference to page 1, lines 1-8 of Samaritini. That is a paragraph which specifically concerns HGH. Even if the last sentence in that

paragraph could be read to refer to highly purified proteins in general, and in context it is not appropriate to do so, an indication that highly purified proteins require stabilization does not constitute a suggestion that any and all highly purified proteins can be stabilized by any and all compounds. There is no basis in such a statement for any "expected success". At the very best, the sentence would constitute a suggestion that it would be "obvious to try" using other stabilizers and obvious to try is insufficient under §103.

There is no suggestion in the references that GRF can be stabilized by saccharose. Therefore the discovery, as shown in the Example of the present application and particularly Tables 1-3, that saccharose can be used to obtain a more stable formulation with respect to a formulation stabilized by mannitol, a stabilizer used commercially for GRF, is not only lacks predictability, but is surprising and unexpected.

For all of these considerations, it is respectfully submitted that the rejection based on Fabbri in view of Samaritini should be withdrawn.

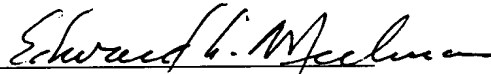
Claims 4 and 5 were rejected under 35 U.S.C. 103 over Fabbri in view of Samaritini and Fujioka. This rejection is also respectfully traversed.

The combination of Fabbri and Samaritini has been discussed above. The additional reference, Fujioki, has been cited only to teach lyophilization of a composition containing 10 mg/vial of GRF. It does not, therefore, cure the basic deficiencies in the prior combination of references. Withdrawal of the rejection is, therefore, respectfully solicited.

In light of all of the foregoing, it is respectfully submitted that this application is now in condition to be allowed and the early issuance of a Notice of Allowance is respectfully requested.

Dated: October 10, 2003

Respectfully submitted,

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